

REMARKS/ARGUMENTS

Claims 9, 11 and 15 have been canceled. Claims 1-8, 10, 12-14 and 16-18 are active in the case. Reconsideration is respectfully requested.

The present invention relates to a process of producing an aqueous primary dispersion of a polymer-ensheathed pigment.

Claim Amendments

Claims 10, 12 and 14 have been amended in order to improve upon the language structure of the claim. None of the amendments introduces new matter into the case. Entry of the new amended claims is respectfully requested.

Claim Rejection, 35 USC 112 & 35 USC 101

The bases of rejection of Claims 9, 11 and 14 is obviated in view of the cancellation of the claims from the record. Withdrawal of the rejection is respectfully requested.

Claim Rejections, 35 USC 102 & 35 USC 103

Claims 1-3 and 7 stand rejected based on 35 USC 102 as anticipated by Antonietti et al, '242. This ground of rejection is respectfully traversed.

The present invention is directed to a method of producing an aqueous polymer dispersion of polymer ensheathed pigment. In the process a miniemulsion of reacting polyisocyanate and hydroxyl group containing monomers as set forth in subparagraph (b) of Claim 1 is prepared and separately a primary dispersion of a dispersed pigment is prepared. The two components are then combined and polymerization is initiated and conducted, usually in the presence of a catalyst. The result is a polymer dispersion wherein very fine particles of pigment are ensheathed in a polymer as a primary dispersion.

The Antonietti et al, '242 publication, although disclosing the preparation of miniemulsions of polymers that may be combined with particulate solids including pigments, nevertheless does not appear to describe an aqueous primary dispersion of polymer-ensheathed pigment as claimed in the present invention. The publication describes what is termed polyaddition products that can be prepared from the reactants described in paragraph {0005} of the publication. The reactants of a particular formulation are reacted in the polyaddition reaction and in the state of a miniemulsion (see the first sentence in paragraph [0013]. Paragraph [0014] then describes what appears to be the mixing of the polymer containing miniemulsion with a particulate material, which preferably is hydrophobized by such as a long-chain fatty acid, to achieve a product in which *the particulate solid is embedded into a shell of the polyadduct*. (See paragraph [0015], first sentence; see also paragraph [0016] for the teaching of an embedding or encapsulation process) The procedure of the publication can be summarized as follows:

- 1) Conduct a miniemulsion polyaddition reaction to form a polyurethane;
- 2) Hydrophobize a particulate solid that may be a pigment;
- 3) Encapsulate the hydrophobized particulate solid into the polyurethane.

Clearly, what is **not** described in the publication is the present process where pigment particles are **ensheathed** within a polymer as it is formed in a primary dispersion.

Accordingly, the anticipatory ground of rejection is overcome and withdrawal of the outstanding ground of rejection is respectfully requested.

Claims 4 and 5 stand rejected based on 35 USC 103 as obvious over Antonietti et al, '242 in view of Tiarks. This ground of rejection is respectfully traversed.

Applicants submit in view of the comments above that one of skill in the art would not be led by the '242 publication to the present invention because nowhere suggested is a process of polymerization of appropriate monomers in a dispersion whereby during the polymerization pigment particles are ensheathed in the polymer that is formed. Tiarks also does not teach or suggest a process of preparing a primary polymer dispersion in which pigment particles are ensheathed within the polymer. Withdrawal of the rejection is respectfully requested.

Claims 6, 8 and 9-14 stand rejected based on 35 USC 103 as obvious over Antonietti et al, '242 in view of Licht, '223. This ground of rejection is respectfully traversed.

The Licht patent discloses a method of a polyurethane or a polyurethaneurea containing isocyanate end groups. The Examiner states that it teaches polyurethane dispersions that carry functional groups such as olefinic groups. However, such a teaching when combined with the teachings of the '242 publication does not lead the skilled artisan to the present invention, since there is no suggestion of ensheathing pigment particles within a polymer as it is formed by the polymerization of appropriate monomers in a primary aqueous dispersion. Accordingly, the outstanding ground of rejection fails and withdrawal of the rejection is respectfully requested.

Claims 15 and 16 stand rejected based on 35 USC 103 as obvious over Antonietti et al, '242 in view of Licht, '223 and in view of Kijstra et al, '002. This ground of rejection is respectfully traversed.

It is noted that the Kijstra et al, '002 patent is not cited on either of the Forms 892 or 1449 attached to the Office Action. Is such a rejection intended?

Claims 17 and 18 stand rejected based on 35 USC 103 as obvious over Antonietti et al, '242 in view of Sarfes et al, '235. This ground of rejection is respectfully traversed.

The Sarfas et al patent discloses non-flocculating pigment compositions that are prepared by "bleeding" pigments with essentially colorless compounds that contain at least one urea or urethane group and at least one basic amino group not attached to an aromatic nucleus. As such the disclosure of the patent is not germane to the point of distinction of the presently claimed invention over the Antonietti et al publication. Accordingly, withdrawal of the rejection is respectfully requested.


It is believed that the application is in proper condition for allowance. Early notice to this effect is earnestly solicited.

Respectfully submitted,

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